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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,682	07/02/2004	Dolf Henricus Jozef Van Casteren	NL 020007	6574

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EXAMINER

LE, TUNG X

ART UNIT	PAPER NUMBER
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2821

DATE MAILED: 07/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/500,682	Applicant(s) VAN CASTEREN, DOLF HENRICUS JOZEF	
	Examiner Tung X. Le	Art Unit 2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 17 July 2006.
- 2a) ☒ This action is **FINAL**.      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,7-10 is/are rejected.
- 7) ☒ Claim(s) 3,5,6 and 11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This is a response to the amendment submitted on July 17, 2006. In virtue of this filing, claims 1-11 are currently presented in the instant application.

#### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-2, 4, 7 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Ranganath et al. (U.S. 5,471,117).

Regarding claim 1, Ranganath discloses in figures 1 and 3 a circuit for a lamp comprising a first sub-circuit (D1-D4,Lm,Cs,CIf,S2,Cb) for connecting to mains voltage (Vin) of a predetermined frequency for rectifying the mains voltage (column 5, lines 11-19); a second sub-circuit (S3-S4) connected to the first sub-circuit (D1-D4,Lm,Cs,CIf,S2,Cb) for providing an alternating current required for the lamp (see column 3, lines 63-67 and column 4, lines 1-10); and a control circuit (control logic) which is connected to the first and the second sub-circuit (see figure 3) and which controls the frequency of the alternating current subject to a varying component (Lr and Ck) of the mains voltage (Vin) rectified by the first sub-circuit (D1-D4,Lm,Cs,CIf,S2,Cb).

Regarding claim 2, Ranganath discloses that the first sub-circuit comprises a filter (CIf) with one or more coils (Lm) and a capacitors (Cs), a rectifier circuit (D1-D4), an switch (S2) and a buffer capacitor (Cb) is coupled to its output terminals (figure 3).

Regarding claim 4, Ranganath discloses in figure 3 that the control circuit (control logic) is connected on one side to an switch (S2) in the first sub-circuit and on the other side to one or more switches (S3-S4) in the switching device, so that the phase and/or frequency of the lamp current controlled by the switching device is controlled subject to a varying component (Lr,Ck) of for instant 50 Hz or a multiple thereof (column 5, lines 11-19 and 43-50).

Regarding claim 7, Ranganath discloses in figure 4 that the second sub-circuit comprises an igniter (Ld) for generating voltage pulse across the lamp so as to ignite the lamp (column 2, lines 62-65).

Regarding claim 10, Ranganath discloses, in figure 3, a method for operating a lamp comprising the steps of rectifying (D1-D4) a supplied mains voltage (Vin) and bringing it to a desired voltage level (an input voltage of the half-bridge and controlled by the controller); and generating an alternating current (see column 3, lines 63-67 and column 4, lines 1-10) wherein the frequency of the alternating current is controlled subject to a varying component (Lr,Ck) of the rectified mains voltage (Vin and column 5, lines 11-19 and 43-50).

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ranganath et al. (U.S. 5,471,117).

Regarding claims 8-9, Ranganath discloses every feature of the claimed invention, as expressly recited in claim 1, excluding a voltage ranges 100V-150V and 10V-100V of the rectified mains voltages. However, such a difference is not of patentable merits since the ranged voltages can be selected at a desired level based on a particular application or environment of use and such a selection of a design choice would have been involved with only routine skills in the art. Therefore, to employ the voltage ranges of Ranganath to be suitable to a desired application or environment of use would have been deemed obvious to a person skilled in the art.

***Allowable Subject Matter***

6. Claims 3, 5-6 and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter:

Prior art of record fails to disclose or suggest the following limitations:

- A circuit for a lamp comprising the second sub-circuit comprises a switching device for providing a square-wave current of a desired level of for instance +/- 0.8 A for normal operation of the lamp, in combination with the remaining claimed limitations as claimed in dependent claim 3.

- A circuit for a lamp comprising the frequency of the alternating current provided by the second-circuit is synchronized with a varying component of the mains voltage rectified by the first sub-circuit, in combination with the remaining claimed limitations as claimed in dependent claims 5-6.
- A method for operating a lamp comprising the phase of the alternating current is equal to the phase of the varying component of the rectified mains voltage, in combination with the remaining claimed limitations as claimed in dependent claim 11.

### ***Response to Arguments***

8. Applicant's arguments filed July 17, 2006 have been fully considered but they are not persuasive.

With respect to claim 1, Applicant argues in page 4 of the argument that Ranganath fails to teach or suggest that a control controls the frequency of alternating current in accordance with a varying component of the mains voltage. The Examiner disagreed.

Ranganath discloses in figure 3 a ballast circuit for a gas discharge lamp controlling and functioning similarly with the instant invention. A varying components (Lr and Ck) is clearly shown in figure 3 which is matched with figure 2 and coil 27 of the instant invention. The controller (control logic) controls the determined voltage and current supplying to the lamp (column 4, lines 20+). Moreover, the voltage is enter-related to the current and frequency of the circuit and comparison of both circuits, the instant invention' circuit and Ranganath's circuit, are the same.

Since Ranganath discloses all claimed limitations, the 102(b) rejection is proper.

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Chang et al. (U.S. 6,362,575 B1) discloses a voltage regulated electronic ballast for multiple discharge lamps.

De Bijl et al. (U.S. 4,949,016) discloses a circuit for supplying constant power to a gas discharge lamp.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

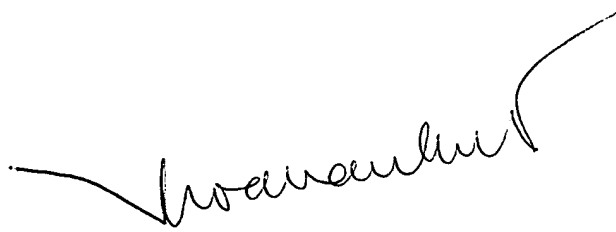
Art Unit: 2821

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung X. Le whose telephone number is 571-272-6010. The examiner can normally be reached on 8:30 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Callahan can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Examiner  
Tung Le  
AU 2821



Hoanganh Le  
Primary Examiner